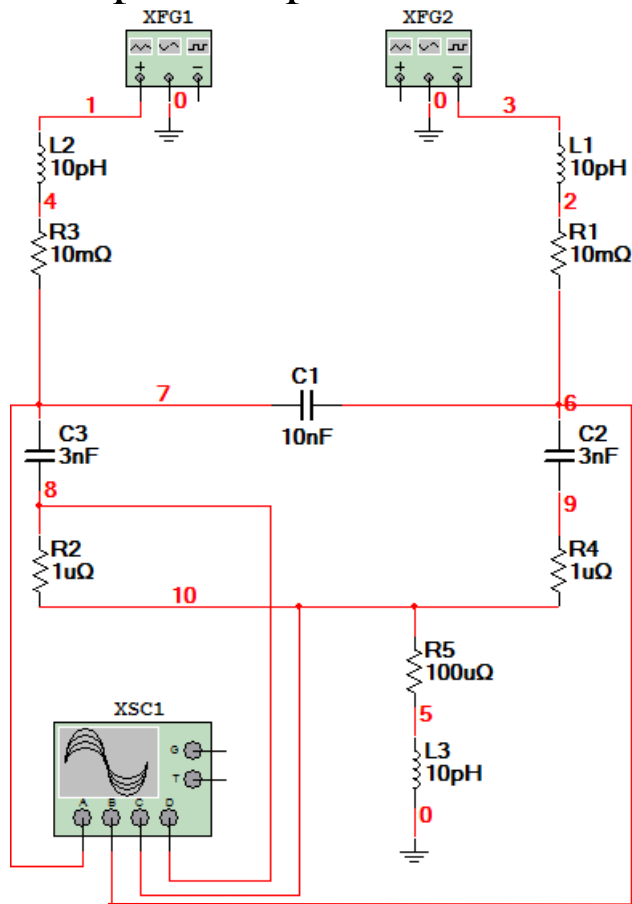
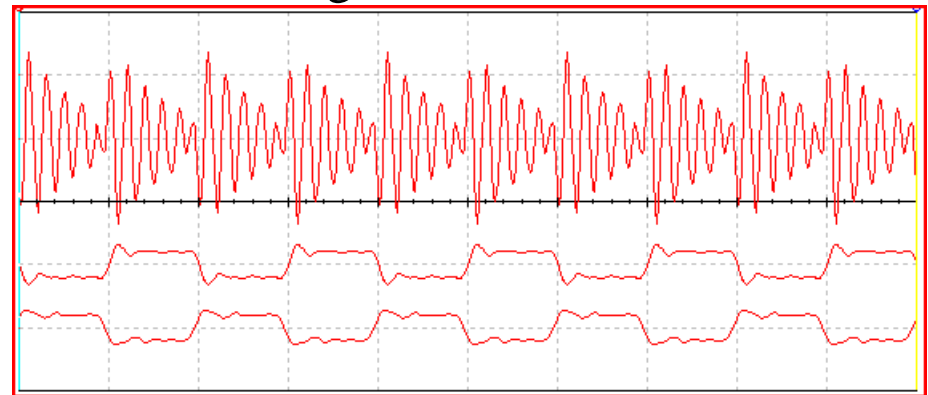


# More substrate bounce

- Circuit assuming connections via multiple bump-bonds:



- Substrate bounce upper trace, 200 mV per division.
- Bounce voltage about  $\pm 250$  mV for  $\pm 1$  V gates.



- Phase 1 and 2 lower traces, 5 V per division .
- Square waves, amplitude 1 V, 50 MHz, 1 ns/2 ns rise times.